PRIMARY CARCINOMA OF THE APPENDIX.

REPORT OF TWO CASES.

BY A. E. GARROW, M.D., AND C. B. KEENAN, M.D.,

OF MONTREAL,

Assistant Surgeons, Royal Victoria Hospital.

CASE I.—Miss E. Y., aged 21, was admitted to the Royal Victoria Hospital on October 1, 1906, complaining of pain in the right lower quadrant of the abdomen. Seven years ago she had for a short period what she calls a "dead soreness" in this region, which was aggravated or brought on by over-exertion. She frequently complained of pain in this side when menstruating, otherwise her general health has been good. Four weeks ago, however, she had an unusually severe attack of pain, accompanied by vomiting, necessitating her confinement to bed at that time for a day or two, and since then she has had in all five similar attacks. In the intervals she was free from pain but there was an abiding tenderness on pressure in the right side. Examination on admission revealed some tenderness to pressure at or about McBurney's point, and a small tender mass could be palpated two finger-breadths below a line running from the umbilicus to the anterior superior iliac spine.

On October 4th incision revealed a slightly adherent appendix, constricted three quarters of an inch from the base and very much distended at its distal portion. There was little evidence of peritoneal inflammation old or recent. The patient made an uninterrupted recovery and from the last report has remained well.

Section of the appendix showed complete occlusion for about one inch, the distended and thinned out terminal part containing clear mucoid material. At the operation this was regarded as a typical example of obliterating appendicitis and I am indebted to Dr. Keenan for the opportunity for adding another case of primary carcinoma of the appendix to the rapidly increasing number of such cases now recorded.

Microscopical examination showed that the occluding mass was not an inflammatory nodule, but a cubical-celled carcinoma

infiltrating all the coats of the appendix. But for the routine examination of all morbid material in the surgical clinic this case would have passed unrecognized. I am indebted to Dr. Mackey of Grenville, who sent the patient to the Hospital, for the opportunity of securing the specimen.

CASE II.—The second patient, I. F., a girl aged 13, was admitted to the Royal Victoria Hospital on March 19, 1907, complaining of pain and tenderness in the right iliac region. Dr. Harwood of Malone who had charge of the patient previously, stated that on March 13th she had been suddenly seized with severe pain in the right iliac region with nausea and vomiting. Extreme tenderness soon developed in the appendix region associated with an increased pulse-rate and moderate fever.

When admitted the patient's condition strongly suggested a perforated appendix with localized peritonitis and she was operated on immediately. The appendix was found lying over the brim of the pelvis, which latter was filled with pus. On freeing the appendix from very slight adhesions its distal third was found dark, almost gangrenous, and distended, measuring one inch in diameter and showing a small perforation. The proximal two-thirds exhibited slight congestion of the serosa only.

Examination of the removed appendix showed a small new growth blocking the lumen just proximal to the swollen portion and this latter consisted of a distended gangrenous appendix well filled with pus. Sections of this growth showed it to be a small cubical-celled carcinoma markedly resembling a rodent ulcer. The greater portion of the mass projected into the lumen, but it also invaded the muscular coats and a few groups of the tumor cells lay just beneath the serosa. The small cubical cells of the tumor were quite distinct in type from the tall columnar cells lining the remaining lumen of the appendix and transition forms could not be found.

The patient made an uneventful recovery and at the present time, a year later, is in perfect health.

Until quite recently carcinoma of the appendix, unless secondary to cæcal cancer, has not been recognized or recorded except in a very few instances. In late years systematic examination of all appendices removed has revealed the fact that primary carcinoma of the appendix is not a rare condi-

tion, for the above two, with those previously recorded make eighty-four cases of primary carcinoma of this organ.

It is interesting to note that most if not all of these cases were diagnosed only when the nodule was sectioned. This is true of our two cases and they both illustrate well one type of the so-called "primary carcinoma" of the appendix, occurring as it so frequently does in young people, Brandts [1] having reported such a case in a seven-year-old boy and Zaaijer [2] another in a girl of twelve. Vassmer,[3] in a recent communication, has stated that such growths do not give rise to any symptoms until appendicitis develops, and believes that the nodule is indirectly responsible for the onset of the inflammatory symptoms. Cases are recorded, however, where such growths were discovered quite accidentally on the post-mortem table, or where laparotomy had been performed for some other condition.

A careful histological study of our two specimens shows that the new growths originated in the submucosa, possibly from embryonic rests, for the small cubical cells composing the growths are quite distinct and apart from the tall columnar cells lining the remaining lumen of the organ.

Some pathologists have termed these nodules "endotheliomata." We must regard such growths as carcinoma in spite of their small size, slow growth, not recurring when the appendix is removed, nor giving rise to metastases, while, as already pointed out, they infiltrate contiguous tissues.

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[1] Brandts. Munch. med. Woch., 1907, s. 1780.
[2] Zaaijer. v. Brunnsche Beitrage z. klin. Chir., Bd. 54, H. 2, s. 239.
[3] Vassmer. Deutsche Zeit. f. Chir., Bd. 91, s. 445, 1908.